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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,632	09/25/2003	Toru Fujita	Q77355	4461

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EXAMINER

TRAN, HOAN H

ART UNIT PAPER NUMBER

2852

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,632

Applicant(s)

FUJITA ET AL.

Examiner

Hoan H. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-77 is/are allowed.
- 6) ☒ Claim(s) 1,8,15 and 24-28 is/are rejected.
- 7) ☒ Claim(s) 2-7,9-14 and 16-23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains legal phraseology such as "comprise". Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities:
 - Page 34, line 13, replace "54" with --55--. [See Fig. 3 for clarification]Appropriate correction is required.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 8, 15 and 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Teraoka et al. ['888]

Teraoka et al. disclose an image forming apparatus comprising an exposure means [Col. 5, lines 3-10] which forms an electrostatic latent image on a surface of an image carrier [1], a transfer means [6], a liquid development apparatus [10] comprising a liquid developer carrier [11] which transports a liquid developer toward a predetermined developing position while

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carrying said liquid developer on its surface [Fig. 3], a developing tank [14], a developer storage tank [20], liquid developer supplying means [Col. 5, lines 44-55], a toner density detecting means [Col. 6, lines 11-13], and a density adjusting means which performs adjustment of a toner density in said liquid developer [Col. 6, lines 8-41].

Regarding claim 25, the claimed method steps are inherent from the product structure.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teraoka et al. in view of Eun et al. ['320]

Teraoka et al., as discussed above, disclose the claimed invention except for a calculating means.

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Eun et al. disclose an image forming apparatus comprising a calculating means [See Abstract].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the image forming apparatus disclosed by Teraoka et al. with a calculating means as taught by Eun et al. for the purpose of calculating a toner consumption coefficients.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teraoka et al. in view of Shimmura ['884].

Teraoka et al., as discussed above, disclose the claimed invention except for the toner density detecting means is an optical toner density detecting means.

Shimmura discloses an image forming apparatus comprising an optical toner density detecting means [Col. 11, lines 1-13].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the image forming apparatus disclosed by Teraoka et al. with an optical toner density detecting means as taught by Shimmura for the purpose of accurately measuring the density of the toner in the container.

Allowable Subject Matter

10. Claims 29-77 are allowed.

11. Claims 2-7, 9-14 and 16-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

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None of the prior art of record teaches or suggests a liquid development apparatus comprising a density adjusting means having at least one stripping member which is disposed facing an area on the liquid developer carrier extending from a carrying start position, at which carrying of the liquid developer starts, to the developing position, contacts the liquid developer carried on the liquid developer carrier, and strips off a portion of the liquid developer, and an amount of toner contained in the portion of the liquid developer stripped off by the stripping member is controlled, whereby the adjustment is performed.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoan H. Tran whose telephone number is (571) 272-2141. The examiner can normally be reached from 8:30 AM - 5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Arthur Grimley can be reached at (571) 272-2136. The central office fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

HHT
March 16, 2005


HOAN TRAN
PRIMARY EXAMINER